

## CLAIMS

1. A remote control system for robot comprising: a robot remote control apparatus for remotely controlling a robot and a robot apparatus controlled based on data from said robot remote control apparatus;

wherein said robot remote control apparatus includes a remote instruction unit for generating control data for said robot apparatus, a first computer unit for inputting and processing said control data, and a first mobile transmission unit for transmitting said control data to a base station connected to a public transmission network; said robot apparatus includes a second mobile transmission unit for receiving said control data transmitted from the base station connected to the public transmission network, and a second computer unit for processing said control data and controlling a mechanism portion; said mechanism portion includes one or two heavy-load working arms, one or two light-load working arms, and a traveling system, all of which are controlled by said second computer unit; and said second computer unit controls said one or two heavy-load working arms, said one or two light-load working arms, and said traveling system on the basis of the control data for said robot apparatus.

2. The remote control system for robot as set forth in

Claim 1, wherein said one or two heavy-load working arms and said one or two light-load working arms, respectively, include a basal arm, a branch arm, a wrist portion and a finger portion.

3. The remote control system for robot as set forth in Claim 1 or 2, wherein said one or two heavy-load working arms and said traveling system are driven by hydraulic power, and said one or two light-load working arms are driven by electric power.

4. The remote control system for robot as set forth in any one of Claims 1 through 3, wherein said traveling system is composed of crawlers driven by hydraulic power.

5. The remote control system for robot as set forth in any one of Claims 1 through 4, wherein said robot apparatus includes a carriage base driven by said traveling system, a cabin on said carriage base, and further includes an on-board instruction unit for controlling said one or two heavy-load working arms, said one or two light-load working arms and said traveling system in said cabin.

6. The remote control system for robot as set forth in any one of Claims 1 through 5, wherein said mechanism portion includes a plurality of cameras for picking up an object and converting the same into image signals, and a plurality of microphones for converting sound and noise generated in the

surroundings into sound signals, said second computer unit transmits said image signals and said sound signals via said second mobile transmission unit, and said robot remote control apparatus receives signals transmitted from said second mobile transmission unit, displays said image signals on a monitor display and sends out said sound signals through a speaker as sound.

7. The remote control system for robot as set forth in any one of Claims 1 through 6, wherein said remote instruction unit includes rotatable and movable steering arms, a plurality of sensors disposed in said steering arms, and a plurality of instruction switches for carrying out ON/OFF instructions, and wherein control data for said robot apparatus is generated on the basis of values of said rotation and movement detected by said plurality of sensors and ON/OFF of said plurality of instruction switches.

8. The remote control system for robot as set forth in any one of Claims 5 through 7, wherein said on-board instruction unit includes rotatable and movable steering arms, a plurality of sensors disposed in said steering arms, and a plurality of instruction switches for carrying out ON/OFF instructions, and wherein control data for said robot apparatus is generated on the basis of values of said rotation and movement detected by

said plurality of sensors and ON/OFF of said plurality of instruction switches.

9. The remote control system for robot as set forth in Claim 7 or 8, wherein said rotatable and movable steering arms are turned into a fixed state or a released state by a fixing mechanism such as a disk pad brake having a disk portion driven by a actuator.